

REMARKS

Claims 1-9 are all the claims pending in the application. In view of the September 21, 2005 Appeal Brief, the Examiner has reopened prosecution, issuing the subject non-final Office Action. The Examiner has cited and applied new art, U.S. Patent No. 5,844,951 to Proakis et al., in the rejection of claims 1-9 under 35 U.S.C. § 102(b).

Proakis et al. relates to a method and apparatus for multichannel combining and equalization in a multichannel receiver. The receiver jointly performs diversity combining, equalization, and synchronization.

With respect to claim 1, the grounds of rejection state that Proakis et al. disclose diversity combining, and that this diversity combining uses more than one algorithm for the combining, citing col. 3, line 15 to col. 4, line 6, and particularly col. 15, lines 51-63 which the grounds of rejection argue disclose that two independent algorithms can be chosen for the combiner. Applicants respectfully traverse this rejection.

Claim 1 recites, *inter alia*:

processing a first combining algorithm (B1) for providing a resulting signal (S1), and a second, differing combining algorithm (B2) for providing a second resulting signal (S2); and

combining the two resulting signals (S1 and S2), wherein the combination depends on the two resulting signals (S1, S2).

While Proakis et al. suggests the use of two algorithms to process signals, the processing of the signals by the algorithms is not as claimed. That is, in the embodiment recited in claim 1, an algorithm is processed to result in signal S1 and a second, differing algorithm is processed resulting in signal S2. Then S1 and S2 are combined. In Proakis et al., the first algorithm is used

by the combiner and another independent algorithm can be used for the equalizer (see col. 15, lines 51-63). However, as shown in Figure 1 of Proakis et al. in its most readily understood form, the signals combined by combiner 20 and its first algorithm are then fed to the equalizers 22a-22p which includes the second algorithm (see also col. 4, line 62 - col. 5, line 5 and col. 16, lines 28-37). That is, each of the signals in Proakis et al. goes through both the first and second algorithms. This is quite different than the method of claim 1. Accordingly, claim 1 is allowable at least for these reasons. Claim 6 is allowable for similar reasons.

Independent claim 8 recites that the signals are processed by a plurality of algorithms based on the condition of the signals, and then one of the processed signals is selected as a representative resulting signal. The reasons in the grounds of rejection for rejecting claim 8 essentially repeat the claim features, while citing the same sections as in the rejection of claims 1 and 6.

Applicants respectfully submit that there is no disclosure in Proakis et al. of selecting one of the processed signals as a representative resulting signal. In Proakis et al., the signals are combined at combiner 20, a plurality of these combined signals are sent to the equalizer circuits 22a-22p, and then the signals are sent to a summer circuit 26. Thus, a representative resulting signal is not selected, but rather the signals are processed, combined, equalized, and then summed (see col. 4, line 62 - col. 5, line 5). As such, Applicants respectfully submit that claim 8 is allowable.

Applicants have amended claim 9 to recite means to select "one of the processed signals as a representative signal." Similarly, Applicants have amended claim 7 to recite "selecting one

of the processed signals as a representative signal.” Arguments for allowability of claims 7 and 9 are similar to those directly above for claim 8.

Dependent claim 2 recites that the quality of the two resulting signals is estimated. Since Proakis et al. does not disclose two resulting signals for the reasons discussed above, Applicants respectfully submit that claim 2 is allowable for this reason as well as its dependence on claim 1. In addition, the grounds of rejection argue that sensors are used for sensing the condition or quality of received signals (citing col. 3, lines 23-47). Applicants submit that the sensors cited would sense the signal condition as it is received, not after it has been processed, as in the present invention.

Claim 3, dependent on claims 1/2, further recites a feature wherein the estimated quality of the two resulting signals (S1, S2) is used to weight the combination of the two resulting signals. Again, Proakis et al. does not disclose two resulting signals. Further, the grounds of rejection cite the algorithms for the purpose of ‘weighting.” Applicants respectfully submit that claim 3 relates to the signals after processing by the algorithms, not before.

Claim 4 is allowable at least based on its dependence on any one of claims 1 through 3. Further, claim 4 recites a feature wherein one of the two algorithms (B1) is a temporal reference algorithm and the other one of the two algorithms (B2) is a spatial reference algorithm. In Proakis et al., there is no suggestion of this feature (i.e. the particular combination of algorithms). Rather, the algorithms are generically disclosed (see col. 15, lines 51-63). Applicants note that the grounds of rejection attempt to argue that the spatial algorithm is disclosed at col. 12, line 56 - col. 13, line 14 and that the temporal reference algorithm is jointly combined at the combining means 38. Applicants are particularly unclear regarding the reasoning of this argument and

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kindly request that the Examiner more clearly define the algorithms, and in particular what is meant by the statement that the "temporal reference algorithm is jointly combined at the combining means 38."

Claim 5 is allowable at least based on its dependence on any one of claims 1 through 4.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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